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EXAMINER

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### DETAILED ACTION

1. Claims 1-**27** are pending in the application.

#### ***Response to Arguments***

2. Applicant's arguments filed in amendment dated 03/04/2010 have been fully considered but they are not persuasive.

In regards to the specific arguments “nowhere does this passage from Chen describe, or even suggest, recovering a carrier - let alone recovering a carrier as claimed by Applicant. The language in this portion of Chen is clear - the first carrier is demodulated and the second carrier is demodulated”, this is incorrect. This limitation is clearly disclosed in Chen (WO 02/089371 A1), wherein **Chen** discloses recovering (demodulating) a carrier from the received multi-level modulation signal as a function of decisions with respect to a first layer of the at least two layers (Fig.'s 4A-B, element 402, 410 & Page 2, lines 5-15 & Page 7, line 23-to-Page 10, line 18 & Claim 6) {Interpretation: The reference discloses recovering (demodulating) a carrier for both the upper and lower layer wherein the lower layer carrier is recovered after decoding the upper layer Viterbi decoder i.e. the reference discloses recovering a carrier of the lower layer (element 410) as a function of decisions with respect to a first layer (output of element 402)}.

Furthermore, the applicant Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a **general allegation** that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references. The applicants fail to clearly

show how the recovering carrier (as recited in the claims) is different from demodulating the carrier (as disclosed in the Chen reference)

In regards to the specific arguments "Nor does Jaffe remedy this defect in Chen. All Jaffe describes is use of a Viterbi decoder for recovering data. Nowhere does Jaffe describe, or suggest, using soft decisions to generate a carrier as claimed by Applicant", this is incorrect. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). In this regard, Chen discloses recovering a carrier from the received multi-level modulation signal as a function of decisions with respect to a first layer of the at least two layers (Fig.'s 4A-B, element 402, 410 & Page 2, lines 5-15 & Page 7, line 23-to-Page 10, line 18 & Claim 6) {Interpretation: The reference discloses recovering a carrier for both the upper and lower layer wherein the lower layer carrier is recovered **after** decoding the upper layer **Viterbi decoder** i.e. the reference discloses recovering a carrier of the lower layer (element 410) as a function of decisions with respect to a first layer (output of element 402}. However, Chen does not explicitly disclose the **viterbi decoder** to be a **soft decision decoder**.

Jaffe discloses a method for use in a receiver for receiving a **satellite signals** (Fig. 1 & Fig. 3) comprising **a viterbi decoder to be a soft decision decoder** (Fig. 3, element 301 & Abstract, lines 8-19 & Column 3, lines 36-62) {Interpretation: The

reference discloses implementing a soft decision viterbi decoder over a hard decision decoder (slicer) to decode encoded signals}.

In regards to the specific arguments "Finally, even if one combined Chen and Jaffe - there is no motivation to further modify this combination to yield Applicant's claimed invention", this is incorrect. The OA dated 12/07/2009 clearly recites a motivation to combine "Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention that Jaffe teaches a soft decision viterbi decoder to decode encoded signals in a receiver and this is implemented in the receiver as described in Chen so as to be able to reliably decode multilayer signals in a low signal to noise ratio channel environment".

Therefore, for the above responses to the arguments presented in the amendment dated 03/04/2010, the rejections have been maintained.

### ***Conclusion***

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to SUDHANSHU C. PATHAK whose telephone number is (571)272-5509. The examiner can normally be reached on 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chieh M. Fan can be reached on 571-272-3042.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2611

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/Sudhanshu C Pathak/  
Primary Examiner, Art Unit 2611